AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) An isolated nucleic acid sequence comprising SEQ ID NO: 1.

2. (Original) The isolated nucleic acid sequence of claim 1, wherein the nucleic acid sequence is DNA.

Claim 3. Canceled.

4. (Previously Presented) An isolated nucleic acid sequence encoding the amino acid sequence of SEQ ID NO: 3.

5. (Currently Amended) A replicative cloning vector comprising the nucleic acid sequence of any of claims 1 or 4 ~~and a replicon operative in an isolated host cell~~.

6. (Original) An isolated host cell transformed with the replicative cloning vector of claim 5.

7. (Previously Presented) An expression vector comprising the nucleic acid sequence of any of claims 1 or 4 operably linked to a transcription regulatory region.

8. (Original) An isolated host cell transformed with the expression vector of claim 7.

Claims 9-13. Canceled.

14. (Withdrawn) A method for identifying a protein involved in bone modulation comprising identifying a protein that has an expression level that is different in a first host comprising the Zmax1 gene when compared to a second host comprising the HBM gene.

15. (Withdrawn) The method of claim 14, wherein the host is a cell or an animal.

Claims 16-21. Canceled.

22. (Withdrawn) A method for identification of a candidate molecule involved in bone modulation comprising

identifying a first molecule that binds to, or that inhibits binding of a second molecule to, the nucleic acid sequence of SEQ ID NO: 1;

identifying whether the first molecule binds to, or inhibits binding of the second molecule to, the nucleic acid sequence of SEQ ID NO: 2; and

comparing the extent of binding, or the extent of inhibition of binding, of the first molecule to each nucleic acid sequence, wherein the molecule that binds, or inhibits binding, more or less to the nucleic acid sequence of SEQ ID NO: 2 or the nucleic acid sequence of SEQ ID NO: 1 is the candidate molecule.

23. (Withdrawn) The method of claim 22, wherein the candidate molecule is a protein or an mRNA.

24. (Withdrawn) A method of pharmaceutical development for treatment of bone development disorders comprising identifying a molecule that binds to the amino acid sequence of SEQ ID NO: 2.

25. (Withdrawn) The method of claim 24, wherein the molecule inhibits or enhances the function of the amino acid.

Claims 26-79. Canceled.

80. (Withdrawn) A method for identification of a candidate molecule involved in bone modulation comprising

identifying a first molecule that binds to, or that inhibits binding of a second molecule to, the nucleic acid sequence of SEQ ID NO: 1.

81. (Previously Presented) The isolated nucleic acid of claim 1 consisting of SEQ ID NO: 1.

82. (Previously Presented) The isolated nucleic acid of claim 4, wherein the nucleic acid is a ribonucleic acid counterpart of the nucleic acid which encodes SEQ ID NO: 3.

83. (Previously Presented) The isolated nucleic acid of claim 82, wherein the nucleic acid is a ribonucleic acid counterpart of SEQ ID NO: 1.

84. (Previously Presented) The isolated host cell of claim 6, wherein the host cell is a bone cell.

85. (Previously Presented) The isolated host cell of claim 8, wherein the host cell is a bone cell.

86. (Currently Amended) The isolated host cell of claim [[84]] 6, wherein the [[bone]] isolated host cell is a mesenchymal stem cell, an osteoclast, an osteoblast, or a chondrocyte.

87. (Currently Amended) The isolated host cell of claim [[85]] 8, wherein the [[bone]] isolated host cell is a mesenchymal stem cell, an osteoclast, an osteoblast, or a chondrocyte.

88. (Previously Presented) The replicative cloning vector of claim 5, wherein the replicative cloning vector further comprises a bone promoter that directs expression.

89. (Previously Presented) The replicative cloning vector of claim 88, wherein the bone promoter is an osteocalcin promoter, a bone sialoprotein promoter, or an AML-3 promoter.

90. (Previously Presented) The expression vector of claim 7, wherein the expression vector further comprises a bone promoter that directs expression.

91. (Previously Presented) The expression vector of claim 90, wherein the bone promoter is an osteocalcin promoter, a bone sialoprotein promoter, or an AML-3 promoter.

92. (Previously Presented) A method for *in vitro* expression of a polypeptide in a host cell comprising:

(a) constructing an expression vector comprising a promoter that directs expression and is operably linked to the nucleic acid of any of claims 1 or 4;

(b) transfecting said host cells with said expression vector; and

(c) expressing the polypeptide of SEQ ID NO: 3 in said host cells under conditions suitable for cell growth.

93. (Previously Presented) The method of claim 92, wherein said host cell is an eukaryotic cell.

94. (Previously Presented) The method of claim 93, wherein the eukaryotic cell is a mesenchymal stem cell, an osteoclast, an osteoblast, or a chondrocyte.

95. (Previously Presented) The method of claim 92, wherein the promoter that directs expression is a bone promoter.

96. (Previously Presented) The method of claim 95, wherein the bone promoter is an osteocalcin promoter, a bone sialoprotein promoter, or an AML-3 promoter.

97. (Previously Presented) The isolated host cell of claim 6, wherein the cell is a mammalian cell.

98. (Previously Presented) The isolated host cell of claim 8, wherein the cell is a mammalian cell.

99. (Previously Presented) The isolated host cell of claim 6, wherein the cell is an avian cell, a rodent cell, or a human cell.

100. (Previously Presented) The isolated host cell of claim 8, wherein the cell is an avian cell, a rodent cell, or a human cell.